



**STATE OF MONTANA
MONTANA DEPARTMENT OF TRANSPORTATION
JOB PROFILE AND EVALUATION**

SECTION I - Identification

Working Title:
District Survey Manager

Department:
Transportation

Class Code Number:
171256

Division & Bureau:
Great Falls, Missoula, Butte, Billings &
Glendive Districts

Class Code Title:
Surveyor

Section & Unit:
District Survey Unit

Pay Band: 6 (Level 2)

Work Address:
statewide

Position Number: 92508, 90008, 90408, 91898, 91208

☐ FLSA Exempt ☒ FLSA Non-Exempt

☒ Non-Union ☐ MPEA ☐ Blue Collar

Profile Completed By:
Bryce Larsen & District Surveyors

Work Phone:

Work Unit Mission Statement or Functional Description:

The MDT's mission is to serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

The Highways and Engineering Division prepares projects for bidding and coordinates highway construction. The division is made up of the Preconstruction and Construction programs; and five District Construction Offices in Missoula, Butte, Great Falls, Glendive, and Billings for budget and workforce purposes.

Each District has a District Survey Unit that is administratively under the District Engineering Services or District Construction program and is under the technical oversight of the Helena Photogrammetry & Survey Section. The District Survey Units are responsible for providing land surveying services, analyzing and reviewing surveys, coordinating surveys, implementing MDT survey policy, assuring quality of surveys, managing survey data, providing technical survey support at the District level and implementing time efficient and cost-effective survey methods.

Describe the Job's Overall Purpose:

The **District Survey Manager** is a senior professional land surveyor (PLS) for the MDT. This position serves as the District's technical authority responsible for directing and overseeing District land survey operations and activities. The position plans and manages District land survey projects; implements

survey procedures and technology at the District level; directs and monitors survey projects; oversees District survey program operations (e.g. supplies, contracts, etc.); and provides technical expertise and consultation. The position reports to the District Engineering Services Supervisor (DESS) or District Construction Engineer (DCE) and is under the technical oversight of the Helena Photogrammetry & Survey Section. This position provides in-line supervision to District Survey Unit staff and provides technical oversight to other District survey crews. The District Survey Manager is in responsible charge of all district survey work being performed under their PLS license.

SECTION II - Major Duties or Responsibilities

% of Time

A. PROJECT MANAGEMENT

50%

1. Directs and coordinates land surveys to establish lost or obliterated property and property controlling corners. This involves establishing appropriate corner search methods and procedures for survey crews, researching and analyzing public and private records to determine boundary locations; and approving and signing survey documents for the most complicated surveys.
2. Directs and oversees the investigation and recovery of field evidence to establish reference points and determine boundary and/or monument locations. This includes comparatively analyzing historical records; making professional judgments as to the character and validity of monuments (historical monuments include stream banks, trees, boulders, etc.); perpetuating corners in accordance with the Corner Recordation Act; ensuring new monuments match the legal deeds as filed in public records; and preparing and publishing all required documentation.
3. Plans and conducts surveys involving technically complex, contentious, and/or legally sensitive issues to ensure the highest standards of quality and efficiency are applied to critical projects. Coordinates with District and headquarters staff and others as necessary to assess the nature and context of survey projects, develops strategies to accommodate specialized needs and requirements, and serves as a technical authority on land survey issues. Provides technical expertise and consultation to other work units to resolve advanced technical and procedural problems associated with various survey procedures and results.
4. Using sound judgment and business practices organizes, computes, adjusts, applies case law and analyses collected field data to make survey related decisions. Directs the preparation of reports, maps, certificates of surveys, corner recordations etc. in accordance with statutory requirements to document decisions and findings related to land surveys.
5. Directs and coordinates the operation and maintenance of survey equipment within the Unit, including vehicles, electronic total stations, theodolites, engineering levels, digital levels, data collectors, CADD workstations, automated systems, GPS survey equipment, and other tools and technologies to ensure effective operations.
6. As a PLS, provides expertise and consultation with the ability to review and modify legal documents, exhibits, property descriptions, ROW plans, etc to ensure the accuracy and compliance of all documentation. This includes the analyzing existing documentation used to define legal parcel boundaries, writing property descriptions, reviewing plans, computing acreages, etc.
7. Directs and oversees the research of public and private records (i.e.- Bureau of Land Management, National Geodetic Survey, United States Geological Survey, county courthouse, county surveyors, private surveyors, etc.) to recover title, monument, and/or other survey histories pertinent to the survey being conducted. Evaluates recovered records and determines how the information is to be utilized.

8. As a PLS, provides direct supervision of preliminary and final right-of-way staking operations for the District. This involves determining right-of-way locations, overseeing right-of-way staking activities, presenting facts to land owners or others and investigating/resolving right-of-way related discrepancies or disputes.
9. Under the direction of the Photogrammetry & Survey Section, works on special statewide survey projects (e.g. densification of Montana's High Accuracy Network (HARN), establishment of continually operating GPS reference stations (CORS), height modernization projects, etc). This requires working with the Photogrammetry & Survey Section to determine survey methods to be used to meet project specifications and coordinating survey activities with District survey personnel and others outside the MDT.
10. In coordination with the Land Survey Manager, plans, performs and reviews professional survey work to ensure accuracy, compliance with procedures and standards, and to determine ownership, set boundary monuments and related professional land surveyor tasks.
11. Solves problems that arise during surveys. This includes correcting inaccuracies in surveys, identifying and obtaining missing data, communicating with landowners, troubleshooting survey software, and resolving a variety of other ambiguities, problems or issues.

B. District Survey Program Development & Administration

30%

1. Directs, plans, and oversees the delivery of District land survey services, procedures, and projects to ensure compliance with state and federal regulations and responsiveness to broader construction project priorities, timelines, and requirements. Assesses district wide construction processes, planned and active projects, land survey practices, and field dynamics; consults with District construction and preconstruction staff to determine available resources and priorities; and reviews surveys prepared by consultants to ensure submittals meet contract requirements.
2. Implements existing and recommends new land survey policies, procedures, and specifications that agree with state and federal requirements. This involves working under the direction of the Land Survey Manager to assess changes in law, national standards, construction project trends, industry practices, district needs, and operations, etc. Under the direction of the Land Survey Manager, conducts periodic policy reviews to identify ways to expedite the land survey process and meet project ready dates in a more timely and efficient manner.
3. Evaluates ongoing District land survey functions and operations to implement new systems, processes, and standards that promote consistency, and efficiency. This involves conducting workflow, cost, and process analyses; determining specific areas of enhancement; and developing and implementing operational improvements. Coordinates with District and Helena staff to promote consistent operations, evaluate and resolve common problems, and ensure the effective integration of inter-District needs and objectives.
4. Manages ongoing survey activities and workflow processes to ensure efficiency, cost-effectiveness, and consistency with construction and preliminary project timelines. This involves reviewing and prioritizing projects to account for contract complexity and scope, available staff and material resources, Department objectives, and other factors. Approves workflow plans and priorities of surveyors and develops ad hoc plans and procedures to accommodate project impediments, seasonal workflow demands, technical and legal requirements, and other issues that continually affect the progress of survey, review, and approval. Provides the direct supervision of all property description preparation in accordance with MCA 37-67-101(7)(g).
5. Plans and monitors all district projects with survey involvement to ensure they remain on schedule and that all required activities are completed in the proper sequence. This involves

planning required activities; establishing and reviewing deadlines for survey activities; estimating staff time required and duration of activities; determining research, equipment, and data needs; providing budget information to the District Engineering Services Supervisor (DESS); ensuring projects are documented in the automated tracking system; attending phase review meetings as necessary; completing project overrides.

6. Maintains liaisons with Photogrammetry & Survey, District offices; other MDT bureaus and divisions; and miscellaneous state and local agencies. This involves exchanging information to coordinate activities, explain projects, and resolve conflicts; interpret statutes and regulations; negotiate the use of staff and other resources; and coordinate and direct cooperative projects.
7. Identifies survey crew training and development requirements through review of work products and oversight of operations, and develops approaches to meet these needs. This includes providing individual instruction, support, and training to district survey crews; coordinating training development and administration with the Photogrammetry and Survey Section; and conducting training for district survey crews and other MDT staff and contractors as requested.
8. Develops, tests, and implements new survey procedures and equipment in coordination with the Photogrammetry and Survey Section to implement cost and time-efficient methods and procedures, including new technology, into the survey program.
9. Coordinates and performs public relations and information dissemination activities to provide survey related information to landowners, solicit parol evidence of original boundary locations from landowners, obtain permission for property access, and to identify and resolve survey related complaints and concerns. This work requires a high level of diplomacy and tact, and close coordination with MDT upper management as many issues are highly volatile, and public support or opposition to projects has a significant impact on project costs and outcomes.
10. Under the direction of the Photogrammetry & Survey Section, provides ongoing oversight and support to District survey crews for survey systems and equipment including data collectors, digital levels, and GPS. This position is responsible for reviewing data for compliance with MDT policy and guidelines, for uploading and distributing survey data to be used by designers and others and acting as the District expert on automated survey data collection systems.

C. DISTRICT SURVEY OPERATIONS

10%

1. Monitors compliance with established operational policies and procedures and achievement of goals through consultation with subordinate staff (e.g., weekly meetings, status reports, etc.), personal review of survey work and associated documentation, and through discussions with other MDT staff and management. Monitors compliance with established policies in various survey projects and reviews and approves atypical procedures at the district level.
2. Develops recommendations for staffing, material, and equipment needs based upon current and projected survey activities. Coordinates with DESS/DCE, Photogrammetry/Survey staff, local/regional government agencies, and other interests (e.g., landowners, designers, etc.) to optimize project resource allocations, schedules, and procedures.
3. Provides information to the DESS/DCE for the preparation of biennial budgets by developing recommendations for allocations for annual fiscal operational plans and recommending spending priorities by reviewing past funding practices, anticipated projects and expenditures, program goals and objectives, and related personnel and other administrative expenses.
4. Determines the need for and coordinates the development, negotiation, and monitoring of project specific survey contracts utilizing the existing District land surveyor term contracts. This

involves monitoring workforce needs, determining when to assign surveys to consultants (if necessary to deliver projects on time), determining the proper consultant to assign the contract to, and ensuring projects stay on schedule.

D. STAFF SUPERVISION

5%

1. Directly supervises the District Survey Unit crew by reviewing and revising overall work plans, priorities, and procedures, and monitoring progress through meetings and consultations. Conducts staff meetings, disseminates data, and promote information exchange for support and advancement of District and Department goals.
2. Sets individual and team goals, determines staff training needs through analysis of program effectiveness, new technology and policies, and staff performance. Prepares, presents, or arranges training through Photogrammetry & Survey, subordinate supervisors, personnel specialists, training offices, or outside consultants to ensure modern technology and the latest methods are used. Ensures consistency in the application of training opportunities for all staff. Ensures that personnel are properly supervised and trained to ensure project designs are cost-effective and meet required standards.
3. Identifies staffing needs and makes recommendations to hire employees. This involves sitting on personnel screening and selection committees, reviewing results and making recommendations for hiring, and ensuring proper training and orientation of new employees.
4. Evaluates the performance of all positions directly supervised and completes performance evaluations. Recommends, implements and monitors corrective disciplinary actions. Enforces disciplinary policies to ensure consistency in application of disciplinary action.
5. Ensures that staff complies with state and departmental personnel rules, regulations, and policies and collective bargaining agreements. Resolves grievances at the lowest level whenever possible.

E. OTHER DUTIES

5%

This position performs a variety of other administrative, project management, and public relations activities as assigned by the DESS/DCE in support of MDT's mission and District objectives. This includes representing the District at conferences and meetings, directing special projects, and attending ongoing education and training as directed.

1. Provides expert guidance and oversight to district design and engineering staff on construction projects and recommends changes that should be made on future contract plans to correct survey and ROW difficulties and to improve the efficiency of the project planning and delivery process.
2. Provides consultant surveyors, district survey crews, and the public with survey information as needed (e.g., National Geodetic Survey data, MDT survey data) by researching information at the district and headquarters office, determining the applicability and validity of the data, and providing appropriate survey data.

Which of the duties and/or specific tasks listed under 1. (above) are considered "essential functions" that must be performed by this position (with or without accommodations)? (If you need information or training on the identification of essential functions, please contact MDT Human Resources Division.)

The following duties are considered essential functions because they require specialized expertise and skill and are the primary reasons the job exists:

Duty A: Project Management

Duty B: District Survey Program Development and Administration

Duty C: District Survey Operations

Duty D: Staff Supervision

The following mental and physical demands are associated with these essential functions:

PHYSICAL

- Lifting objects in excess of 30 lbs.
- Extensive travel throughout the state and districts to project locations
- Ability to walk over uneven terrain or in water
- Operating a personal computer
- Communicating in writing, in person and over the phone
- Continual walking or standing
- Exposure to extreme weather and high-speed traffic
- Operation of motor vehicles
- Operation of power tools and/or equipment

MENTAL

- Computing arithmetic operations
- Comparing data
- Compiling information, Analyzing, Coordinating, Synthesizing, Negotiating, Instructing
- Ability to multi-task
- Ability to meet inflexible deadlines
- Decision-making that affects the public health and safety
- Instructing
- Interpersonal skills/behaviors
- Dealing with the public on a regular basis
- Demands for accuracy in all aspects of work

Does this position supervise others? ☒ **Yes** ☐ **No**

Number directly supervised: varies

Position Number(s) of those supervised:

In-line supervision for District Survey Unit positions. Provides oversight of field crews on survey projects

This position is responsible for:

- | | | |
|---|-------------------------------------|---|
| <input checked="" type="checkbox"/> Participates on recruiting committee | <input type="checkbox"/> Firing | <input checked="" type="checkbox"/> Supervision |
| <input checked="" type="checkbox"/> Performance Management | <input type="checkbox"/> Promotions | <input checked="" type="checkbox"/> Discipline |
| <input checked="" type="checkbox"/> Other: scheduling, training, assigning and reviewing work, providing final signature authority. | | |

SECTION III - Minimum Qualifications - List minimum requirements for the first day of work.

knowledge and skills required for this position:**KNOWLEDGE:**

Predominant work of the position requires advanced professional knowledge of the concepts, principles, and developmental applications of land surveying and related mathematics (e.g., geometry, trigonometry, statistics, etc.); legal principles, guidelines, and precedents related to surveying (e.g., Montana Subdivision and Platting Act, Sanitation in Subdivisions Act, Uniform Standards for Monumentation, etc.); case law related to property boundaries; survey computation and data analysis; State and federal survey policy and procedures; and specialized applications of various instrumentation. The position also requires knowledge of specialized information system operations (e.g., OPX-2, etc.); GPS/GIS applications; and supervisory practices and techniques.

SKILLS:

This position requires skill in directing, organizing, and coordinating multiple staff and complex projects; examining, interpreting, and translating technical/legal information to broad audiences, standard office software applications (e.g., word processing, database, etc.), and strong written and verbal communications. This position also requires skill in the use of specialized surveying equipment such as electronic total stations, theodolites, engineering levels, digital levels, data collectors, CADD workstations, automated systems, GPS survey equipment, and other tools and technologies.

Behaviors required to perform these duties?

See MDT Core Behaviors.

Education:

Check the one box indicating minimum education requirements for this position for a new employee the first day of work:

- | | |
|---|--|
| <input type="checkbox"/> No education required | <input type="checkbox"/> Related AAS/2-years college/vocational training |
| <input type="checkbox"/> High school diploma or equivalent | <input checked="" type="checkbox"/> Related Bachelor's Degree |
| <input type="checkbox"/> 1-year related college/voc. training | <input type="checkbox"/> Related Master's degree |

Please specify the acceptable and related fields of study:

Required/Acceptable: Bachelor's degree in land surveying or geomatics or related field from an accredited college or university AND six years experience, two of which must be progressively responsible professional land survey experience including experience with full project oversight. Licensure in Montana as a professional land surveyor and a valid Montana driver's license are required.

Related: Civil Engineering Technology or Construction Technology or other curriculums with coursework in math, drafting, surveying techniques, principles, and practices

Other education, training, certification, or licensing required:

- Requires Montana Professional Land Surveyor (PLS) license
- Requires a valid Montana Drivers License.

Experience:

Check the one box indicating minimum work-related experience requirements for this position for a new employee the first day of work:

- ☐ No prior experience required
☐ 1 to 2 years

- ☐ 4 years
☒ 6 years (4 yrs pre-professional, 2 yrs post-professional)

Other specific experience (optional): Requires a minimum of six years experience, two of which must be progressively responsible professional land survey experience including experience with full project oversight. Licensure in Montana as a Professional Land Surveyor and a valid Montana driver's license are required.

Alternative Qualifications:

This agency will accept alternative methods of obtaining necessary qualifications.

☒ Yes ☐ No

Alternative qualifications include:

Other related education and experience combinations will be considered.

SECTION IV – Other Important Job Information

Survey and project oversight activities involve physical activities such as digging, cutting, hiking, and carrying equipment weighing in excess of 30 pounds, often over rough terrain. The position involves exposure to conditions and hazards associated with working outdoors in all weather conditions, work in remote areas, exposure to wild animals and insects, and hazards associated with working on or near active construction projects and around traffic moving at highway speeds. Extensive statewide travel from the District reporting station or Helena headquarters and shifts other than normal are required to accomplish department goals and objectives.

- | | | |
|---|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver's license | |
| <input checked="" type="checkbox"/> Driver's record check | <input type="checkbox"/> Background check | <input type="checkbox"/> Other; Describe |

SECTION V – Signatures

Signature indicates this statement is accurate and complete.

Employee:

Name: _____ Title: _____

Signature: _____ Date: _____

Immediate Supervisor:

Name: _____ Title: _____

Signature: _____ Date: _____

Division/District Administrator:

Name: _____ Title: _____

Signature: _____ Date: _____

Department Designee:

Name: Jennifer Jensen/Designee Title: Chief Human Resources Officer
Human Resources Division

Signature: _____ Date: _____
